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LETTER TO THE EDITOR

Forced social isolation due to COVID-19 and consequent mental health problems: Lessons from *hikikomori*

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The COVID-19 pandemic has forced a worldwide lockdown with huge numbers of citizens confined to their homes,[1] often resulting in social isolation, which may lead to mental health problems. One of the best examples of consequences of severe social isolation is the condition known as *hikikomori* – a form of severe social withdrawal that was originally described in Japan in the late 20th century and has more recently been found worldwide.[2–4] In the 2010 guideline on *hikikomori* by the Japanese Ministry of Health, Labour, and Welfare, the definition of *hikikomori* was described as an avoidance of social participation, which in principle has continued under the condition of being housebound for a period of more than 6 months.[5]

There are similarities and differences between *hikikomori* and COVID-19-related social isolation. Just recently, we developed a draft set of international *hikikomori* criteria, which defines the severity as mild, moderate, or severe depending on whether the person leaves home up to 3 days a week, one or fewer days per week, or rarely leaves a single room.[6] Individuals experiencing COVID-19-related social isolation may be measured using the same scale; however, it should be recognized that individuals with *hikikomori* avoid social situations voluntarily, while COVID-19-related social isolation may be enforced by government restrictions and/or due to an individual's fears of infection.

In the past two decades, numerous studies have investigated the psychological impact of quarantine (i.e., forced social isolation) due to epidemics, such as SARS and MERS, revealing that the experience of quarantine is associated with higher prevalence of stress-related mental disturbances, such as anxiety, depression, and especially avoidance behaviors.[7] Similarly, based on our clinical experiences, traumatic events, such as economic, social, or political crisis, can cause even previously healthy people to avoid social contact and enter a *hikikomori* state with psychiatric conditions.[3] Thus, we herein hypothesize that COVID-19-induced social isolation and the consequent economic crisis may be risk factors for *hikikomori* in the post-pandemic world.

At onset, individuals with *hikikomori* tend not to suffer and are satisfied because they have escaped real-world stresses. However, longer lasting social isolation gradually increases loneliness, which is a crucial risk factor for mental disturbances, including anxiety, depression, and addiction disorders.[3] Prolonged home confinement may lead to domestic discord, domestic violence, and in extreme cases even homicide.[2] If COVID-19-induced social isolation were to last more than several months, similar *hikikomori*-related problems might occur much more frequently among the huge numbers of individuals who are forced to stay at home. In fact, COVID-19-related family violence and homicides have already emerged.

The Internet and its related social media platforms are believed to be useful tools to combat social isolation and physical distance. However, there is little evidence about the effectiveness of substituting direct contact among people by communication via the Internet. In addition, it is highly probable that there are pathogenetic links between life in a society relying on Internet communication, social isolation, and mental health problems, including Internet addiction,[8] and that therefore social isolation and the reliance on the simple virtual tools widely used during the current crisis elevate the risk of Internet addiction and other disturbances of mental health. It is possible that the introduction of 'face-to-face'-like communication systems with innovative technologies, such as virtual reality and humanoid robotics, would prevent or reduce COVID-19-induced mental health problems.

Even though no statistical data exist, there are anecdotal examples of people in Japan and perhaps elsewhere who fear that their COVID-19-positive status might become known in their community and this makes them hesitate to take a polymerase chain reaction test – a behavior similar to that of individuals with *hikikomori* and their family members, who avoid contact with psychiatrists in order to avoid being given a psychiatric diagnosis. In Japan and some Asian countries, both fears are probably deeply rooted in traditional-culture-based shame (*haji*) and social ostracism (*murahachibu*), which have, during past epidemics and economic crises, often led those sick or financially ruined to commit suicide.[3, 9] Recent reports of COVID-19-related suicides might support this hypothesis.[9] Action against COVID-19 must therefore include a component addressing the prevention of stigmatization of the disease to avoid covert spread of the disease and other consequences of stigma related to the disease, such as depression and suicide.

Generally, *hikikomori* support programs are designed to change avoidance behaviors of persons with *hikikomori*.[5] We have recently developed a family-based educational program to reduce the stigma toward psychiatric disorders and the risk of family violence, suicide, and other mental disturbances due to *hikikomori*, using lectures and role-play sessions.[10] This program is based on the Mental Health First Aid, which aids in the detection of early signs of mental health problems before onset, and the Community Reinforcement and Family Training that was originally developed for family members of individuals with addiction disorders.[10] We believe that these *hikikomori* support programs especially using online educational systems might be useful in the effort to make social isolation more tolerable and prevent its negative consequences.

COVID-19 may be changing global society in fundamental ways, hastening the online revolution as virtual spaces and environments supersede traditional boundaries, such as the urban and rural. To overcome this current chaos, psychiatric specialists along with experts from a wide-ranging number of fields, such as psychology, engineering, sociology, and politics, must take action to provide for the new reality of global mental health.

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Disclosure statement

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